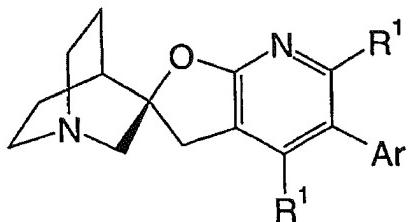
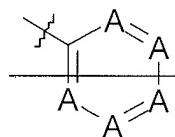


AMENDMENTS TO THE CLAIMS

1. (Currently amended) A compound in accord with formula I:



wherein: Ar is a moiety formula II: $2-[^{18}\text{F}]\text{fluoro-3-pyridyl}$



II

wherein:

~~A is independently at each occurrence CR⁴ or N provided at least one A is R⁴;~~

~~R¹ is independently at each occurrence H, C₁-C₆alkyl, or halogen, provided that at least one occurrence of R⁴ comprises tritium or a halogen radioisotope.~~

2-4. (Cancelled).

5. (Currently amended) A compound according to Claim 1, wherein R¹ is hydrogen or fluorine, and A is N at no more than one occurrence.

6-10. (Cancelled).

11. (Currently Amended) A diagnostic composition comprising ~~a compound of the invention, said compound of~~ Claim 1 and a pharmaceutically-acceptable diluent or carrier.

12 (Withdrawn-Currently Amended) A method for diagnosis of diseases or conditions in which detection of the $\alpha 7$ nicotinic receptor beneficial comprising:

administering to a subject a detectable amount of ~~a compound of the invention said compound of~~ Claim 1;

detecting the presence and distribution of said compound in said subject;

analyzing the distribution of said compound in said subject;

using said distribution to assess the disease or condition of said subject.

13. (Withdrawn) The method of Claim 12 for the diagnosis of psychotic disorders or intellectual impairment disorders.

14. (Withdrawn) The method of Claim 12, for the diagnosis of Alzheimer's disease, learning deficit, cognition deficit, attention deficit, memory loss, Attention Deficit Hyperactivity Disorder, anxiety, schizophrenia, mania, manic depression, Parkinson's disease, Huntington's disease, Tourette's syndrome, neurodegenerative disorders in which there is loss of cholinergic synapse, pain, and for ulcerative colitis.

15. (Withdrawn) A kit comprising:

an administrable and detectable quantity of a compound according to Claim 1, and

instructions for administering and thereafter detecting the distribution of said compound in a subject.